

REMARKS

The Applicant's below-named representative would like to thank Examiner Steve Cernoch and Supervisory Primary Examiner Davis Hwu for the helpful and courteous discussion of the issues in the Application held on March 12, 2009. Examiners Cernoch and Hwu are thanked for the indication that the rejections over US Patent 6,293,476 B1 to Pettit will be withdrawn based on the distinctions between the presently claimed invention and Pettit. The substance of this discussion is summarized and further expanded upon in the following comments.

35 U.S.C. § 102(b) rejection over Pettit (U.S. Patent 6,293,476 B1)

Claims 1-3 and 6 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Pettit. This rejection is traversed.

Claim 1 specifies a spray nozzle for spraying fountain solution or the like comprising a spray opening that is oblong, and hence gives a flat spray. According to Merriam-Webster's Collegiate Dictionary, 10th Edition, 1993, the term "oblong" means "deviating from a square, circular, or spherical form by elongation in one dimension." A copy of this definition is included with this Response as Exhibit A.

Pettit discloses an HVLP spray gun air cap (FIGS. 1-3) including an axial passage with a round cap opening (12) and air horns (20, 30) having orifices (22, 24, 32, 34) from which air jets are directed to converge upon the diverging atomized spray emitted from the cap opening (12) to form a generally flattened spray pattern. Pettit additionally discloses opposing and diverging air passages (40, 50) located within the outer side (14) of the cap opening (12). These passages have corresponding orifices (41, 51) which increase the width of the spray pattern and reduce the spray density at opposite end portions thereof.

Pettit does not anticipate claim 1 for at least the following reasons. First, the air cap opening (12) disclosed in Pettit, best viewed at FIG. 1, is round. Because claim 1 specifies a spray opening which is oblong, Pettit fails to disclose the invention as claimed. Second, the air cap opening (12) of Pettit does not itself create a flat spray, as specified in claim 1. Instead, the air cap (FIG. 2) of Pettit relies upon air jets formed by orifices (22, 24, 32, 34) in air horns (20, 30) and the diverging air passages (40, 50) to shape the conical spray pattern emitting from the air cap opening (12) into a flattened spray. Thus, Pettit fails to disclose a spray opening which

gives a flat spray and therefore does not anticipate the invention, as claimed. For at least the foregoing reasons, Pettit does not anticipate claim 1 and by extension dependent claims 3-9. Withdrawal of the rejection is requested.

35 U.S.C. § 103(a) rejection over Pettit

Claims 4, 5, and 7-9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Pettit. This rejection is traversed. Claims 4, 5, and 7-9 depend from claim 1. Independent claim 1 is not obvious over Pettit for at least the following reasons.

First, Pettit makes no suggestion or teaching to provide a spray nozzle in which the spray opening is oblong, as specified in claim 1. Rather, Pettit teaches the use of air jets emitting from air horns (20, 30) and opposing air passages (40, 50) to shape a conical spray emitting from an air cap opening (12) into a flattened spray pattern. As such, there would be no reason to modify the air cap opening (12) of Pettit to be oblong because a flat spray is achieved by means other than the air cap opening (12). Further, Pettit makes no teaching whatsoever that the use of an oblong spray opening in combination with the air jets from the air horns (20, 30) and opposing air passages (40, 50) would result in a successful fan spray pattern. For at least this reasoning, Pettit fails to teach the invention, as specified in claim 1.

Second, one skilled in the art of fountain solution printing would not have considered the teachings of Pettit. It is well known by persons skilled in the art of printing that it is desired to spray droplets having a relatively large size for applying fountain solution. The spray nozzle of claim 1 produces such a spray. However, the air cap disclosed in Pettit is for an HVLP type nozzle which uses high velocity air for shaping and breaking droplets of a conically shaped spray. The resulting small size droplets produced by an HVLP type nozzle will have difficulties penetrating the boundary layer between the air on the roll onto which the fountain solution is being sprayed and the air outside the boundary layer. When this occurs, an abundance of the droplets that are too small will spread at the printing site. Therefore, one skilled in the art would not have utilized the HVLP type nozzle and air cap disclosed by Pettit in the fountain solution spraying application of claim 1.

For at least the foregoing reasons, claim 1 is not obvious over Pettit. Because claims 3-9 depend from claim 1, they are patentable for the same reasons already stated in support of claim 1. Withdrawal of the rejection is requested.

In view of the above amendments and remarks, Applicant respectfully requests a Notice of Allowance.



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Respectfully submitted,

MERCHANT & GOULD P.C.
P.O. Box 2903
Minneapolis, Minnesota 55402-0903
(612) 332-5300

A handwritten signature in dark ink, appearing to read "Dennis R. Daley". The signature is written over a horizontal line.

Dennis R. Daley
Reg. No. 34,994
DRD/TPJ/cjc